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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,377	07/27/2000	GERHARD SCHMITT	21551	2311

535 7590 06/15/2005

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EXAMINER

DUONG, THANH P

ART UNIT PAPER NUMBER

1764

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/601,377

Applicant(s)

SCHMITT, GERHARD

Examiner

Tom P. Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

In view of the appeal brief filed on 3/9/05, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Claim Rejections - 35 USC § 103***


The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 7-8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayers (2,958,298) in view of Priestley (4,021,184) and Flesch et al. (4,146,369). Regarding claims 7 and 11, Mayers discloses a reactor (12) for gasifying granular fuels

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(coal), which comprises: a casing (12); a reservoir (15) for holding the granular fuel and communicating with the inside of the casing; structure in said casing (12) for defining a fixed bed (11) of the granular fuel at a lower portion of which, an oxygen-containing gasification medium (air via line 14) is introduced, said gasification medium moving up through said fixed bed of granular fuel; a discharge duct (ducts extending upwardly from cyclone 16 to line 17) located above the fixed bed of granular fuel through which product gas (heated gas) containing hydrogen and carbon oxides is withdrawn from the reactor; and at least one centrifugal separator (cyclones 16) in said casing for separating solids (Col. 4, lines 5-10) from the product gas (heated gas exiting line 17), having an inlet opening (not described but inherent feature of a cyclone device; see cyclone inlets 38 of Priestley '184) for dust-laden product gas coming from the fixed bed (11) of granular fuel, an outlet line (line 17) for product gas, and a solid discharge line (not shown but inherent feature of a cyclone device; see solid discharge conduits 43 and 44 of Priestley '184) leading into the fixed bed, said outlet line (ducts extending upwardly from cyclone 16 to line 17) communicating with the discharge duct (line 17). Mayers discloses fuel can be ignited by external means to initiate the combustion but fails to disclose a gas inlet for said gasification medium below said bed and admitting said gasification medium to said fuel for an endothermic reaction thereof with partial oxidation. Priestley teaches a plurality of gas inlets (fuel guns 31) penetrating the vessel wall to furnish the fuel for the reactor chamber (Col. 2, lines 34-36). Thus, it would have been obvious in view of Priestley to one having ordinary skill in the art to modify the combustor of Mayers with gas inlets as taught by Priestley in order to initiate

and facilitate combustion of the granular fuel. With respect to the phrase "fixed bed", Applicant has not clearly defined in the original specification what constitutes a "fixed bed". Page 1, third paragraph, of the original specification merely discloses "As fuel, all kinds of coal are used including lignite and peat, to which various waste substances may be added." Mayers discloses granular fuel source such as coal and lignite (Col. 4, lines 7-11) of the claimed invention and Priestley discloses the gasification or incineration of waste matter (Col. 1, lines 1-10). Thus, Mayers and Priestley disclose the structure of the claimed invention. Note, Applicant is free to be his or her own lexicographer, a patentee or applicant may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings if the written description clearly redefines the terms. See, e.g., *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). Alternatively, Flesch '369 makes it clear that selecting a larger size gasification medium will allow the gassifier system to operate as a "fixed bed" and/or selecting a smaller size gasification medium will allow the gassifier to operate as a "fluidized bed" (Abstract and Col. 1, lines 8-30). Thus, it would have been obvious in view of Flesch to one having ordinary skill in the art to modify the apparatus of Mayers with the larger fuel size as taught by Flesch, on the basis of suitability for intended use and absent showing any unexpected results since selecting a larger fuel size result in operating a reactor as a "fixed bed". Regarding claim 8, Priestley discloses all the limitations as described above and further discloses outlet lines of the separators open into an annular chamber  disposed in the

upper portion of the reactor, which annular chamber communicates with the discharge duct.

4. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over applied reference (Mayers '298 in view of Priestley '184 and Flesch '369) as applied to claim 7 above, and further in view of Angel (2,433,726). The applied references fail to disclose a vertical annular wall is provided in the upper portion of the reactor and the inlet opening of the separator is disposed outside the portion of the reactor enclosed by the annular wall and the separator is disposed outside the portion enclosed by the annular wall. Angell teaches separators 22 are disposed outside the portion enclosed by the annular chamber (conical lower section 4), which has an inclined, vertical annular wall. Angell also shows the outlet line of the separators 22 is disposed in the header 25 (discharge duct) and the header 25 is communicated with the annular chamber (conical lower section 4) and the inlet opening of the separator is disposed outside the portion of the reactor enclosed by the vertical annular wall. The inclined, vertical annular wall isolates the vapors and gases (Col. 5, lines 26-35) in the header 25 from mixing with the incoming regenerating gas from line 13. Thus, it would have been obvious in view of Angell to one having ordinary skill in the art to modify the reactor of applied references with annular chamber having a vertical annular wall as taught by Angell in order to prevent intermixing of the vapors and gases from header with the incoming regenerating gas.

### ***Response to Arguments***

Applicant's arguments with respect to the "fixed reactor" in claims 7-11 have been considered but are moot in view of the new ground(s) of rejection as described above. With respect to the argument of the location of the separator(s) in the reactor, it would have been obvious in view of the applied references to one having ordinary skill in the art to optimize the location of the separators in the reactor on the basis of suitability for intended use and absent showing any unexpected results since the separators of the applied references provide effective means of separating the exhaust gas and solids as claimed. See MPEP 2144.07. With respect to the argument of "partial oxidation" in the reactor, the applied references disclose the structure of the claimed invention; thus, one of ordinary skill in the art would have expected the applied references' reactor provide a "partial oxidation" reaction.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

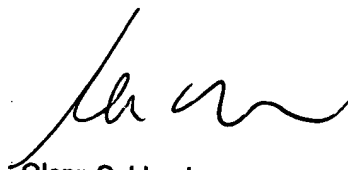
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong  
June 1, 2005

TD *TD*



Glenn Caldarola  
Supervisory Patent Examiner  
Technology Center 1700